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EXAMINER

WINTERS, MAREISHA N

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 09/04/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

# Office Action Summary

Application No.

09/455,932

Applicant(s)

OKANO ET AL.

Examiner

Mareisha N. Winters

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the Request for Continued Examination filed on June 18, 2003. Claims 1-6 have been amended and Claims 7 and 8 have been newly added.

2. Claims 1-8 remain pending in the application.

#### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 23, 2002 has been entered.

#### ***Claim Objections***

4. Claim 6 is objected to because of the following informalities: in line 16, there is a repeated instance of the word "the". Specifically, the phrase "as the the load" should read --as the load--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 4 and 6 recite the limitation "route measuring unit" in line 6. This limitation is ambiguous. In order to clarify the claim language should "route measuring unit" read --route *load* measuring unit--?

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1-3, 7 and 8 are rejected under 35 U.S.C. 102(a) as being anticipated by International Publications WO 98/26559 to Joffe et al. (hereinafter "Joffe").

In considering claim 1, Joffe discloses a relaying apparatus for use in a network system, the network system including a plurality of client terminals and server terminals providing services to those client terminals via a network (see page 5, 4-12), the relaying apparatus comprising:

a plurality of route load measuring units (see Fig. 3A, "364", "366") each provided in the vicinity of each of said server terminals and each measuring a respective load in a route from the route load measuring unit to one client terminal having issued a request for service out of said client terminals (see page 18, lines 2-5); and

a selecting unit which selects one server terminal out of said server terminals as a destination of the request for service from said one client terminal based on the load measured by said route load measuring units (see page 17, lines 14-20),

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wherein said route load measuring units each measures, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on a plurality of parameters (see page 20, lines 5-8).

In considering claim 2, Joffe further discloses a storing unit which stores the load measured at a pre-specified time interval by each of said route load measuring units (see page 18, lines 5-6), and wherein

when a request for service is received from said one client terminal, said selecting unit selects said one server terminal out of said server terminals as a destination of the request for service from said one client terminal based on the load stored in the storing unit (see page 18, lines 5-6 and page 17, lines 17-20).

In considering claim 3, Joffe further discloses wherein each of said route load measuring units monitors operating states of respective server terminal (see page 18, lines 16-18) and

when a request for service is received from said one client terminal, said selecting unit selects one server terminal out of said server terminals as a destination of the request for service from said one client terminal based on the load and the operating states monitored by said load measuring units (see page 17, lines 14-20).

In considering claim 7, Joffe discloses a relaying apparatus for use in a network system, which network system is formed with a plurality of client terminals and server terminals providing services to the client terminals via a network (see page 5, 4-12), comprising:

a plurality of path load measuring and operating state monitoring devices (see Fig. 3A, "364", "366"), arranged to measure effective bandwidths of path loads from a client

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terminal requesting service to server terminals (see page 18, lines 2-5) and to monitor operating states of server terminals (see page 18, lines 16-18); and

a DNS-responding device to compare effective bandwidths of measurements of path loads from the plurality of path load measuring and operating state monitoring devices to the client terminal and to select a server terminal having a largest effective bandwidth and an active operating state to provide service to the client terminal (see page 19, lines 21-31 – page 20 lines 1-15).

In considering claim 8, Joffe discloses a relaying apparatus for use in a network system, which network system is formed with a plurality of client terminals and server terminals providing services to the client terminals via a network (see page 5, lines 4-12), comprising:

a plurality of path load measuring and operating state monitoring devices (see Fig. 3A, “364”, “366”), arranged to measure, as loads in paths from a client terminal requesting service to server terminals, effective bandwidths of the paths (see page 18, lines 2-5) and to monitor operating states of server terminals (see page 18, lines 16-18); and

a DNS-responding device to compare the effective bandwidths measured by the path load measuring and operating state monitoring devices and to select a server terminal having a largest effective bandwidth and an active operating state to provide serve to the client terminal (see page 19, lines 21-31 – page 20, lines 1-15).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe in view of U.S. Patent No. 6,327,622 to Jindal et al (hereinafter "Jindal").

In considering claim 4, Joffe discloses a relaying apparatus for use in a network system, the network system including a plurality of client terminals and server terminals and that provide services to those client terminals via a network (see page 5, 4-12), the relaying apparatus comprising:

a plurality of route load measuring units (see Fig. 3A, "364", "366") each measuring a respective load in a route from the route measuring unit to one client terminal having issued a request for service out of said client terminals (see page 18, lines 2-5); and

a selecting unit which selects one route load measuring unit out of said route load measuring units as a primary destination of the request for service from said one client terminal based on the load measured by said route load measuring units (see page 17, lines 14-20); and

said route load measuring units each measures, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on a plurality of parameters (see page 20, lines 5-8).

Although the system disclosed by Joffe shows substantial features of the claimed invention, as discussed above, it fails to disclose that the server terminals *are divided into several groups each having at least two of the server terminals* and *said one route load measuring unit selects one server terminal out of the server terminals in the group as a*

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*secondary destination of the request for service from said one client terminal.*

Nonetheless, these features are well known in the art and would have been an obvious modification to the system disclosed by Joffe, as evidenced by Jindal.

In an analogous art, Jindal discloses a system for load balancing among replicated services having server terminals divided into sever groups each having at least two of the server terminals (see Fig. 4, "400" and "410") and selecting one server terminal out of the server terminals in the group as a secondary destination of the request for service from said one client terminal (see Fig. 4; Note that in Fig. 4 each "IRMO" points to multiple servers, therefore it is clear that one server terminal will be selected based upon the results in the route load measuring unit and the other server will be a secondary destination.). Given this teaching by Jindal, a person having ordinary skill in the art would have readily recognized the advantages and desirability of modifying Joffe by incorporating these well known features in order to provide for fault tolerance.

In considering claim 5, Joffe further fails to disclose *wherein each said route load measuring units monitors operating states of the respective server terminals in the group, and said one route load measuring unit selects one server terminal out of the server terminals in the group based on the operating states when selecting the secondary destination.* Nonetheless, these features are well known in the art and would have been an obvious modification to the system disclosed by Joffe, as evidenced by Jindal. Jindal discloses wherein each said route load measuring units monitors operating states of the respective server terminals in the group (see column 3, lines 5-9), and said one route load measuring unit selects one server terminal out of the server terminals in the group based on the operating states when selecting the secondary destination (see column 2, lines 51-



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53; Note that the "selected policy" is the operating state of the server terminal.). Given this teaching by Jindal, a person having ordinary skill in the art would have readily recognized the advantages and desirability of modifying Joffe by employing this well known feature in order to provide for fault tolerance.

In considering claim 6, Joffe discloses a relaying apparatus for use in a network system, the network system including a plurality of client terminals and server terminals that provide services to those client terminals via a network (see page 5, 4-12), the relaying apparatus comprising:

a plurality of route load measuring units (see Fig. 3A, "364", "366") each measuring a respective load in a route from the route load measuring unit to one client terminal having issued a request for service out of said client terminals (see page 18, lines 2-5) and monitoring operating states of said server terminals (see page 18, lines 16-18); and

a selecting unit which selects one route load measuring units out of said route load measuring units as a primary destination of the request for service from said one client terminal based on the load measured and the operating states monitored by said route load measuring units (see page 17, lines 14-20); and

said route load measuring units each measures, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on a plurality of parameters (see page 20, lines 5-8).

Although the system disclosed by Joffe shows substantial features of the claimed invention, as discussed above, it fails to disclose that the server terminals *are divided into several groups each having at least two of the server terminals* and *said one route load*

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*measuring unit selects based on the operating states one server terminal out of the server terminals in the group as a secondary destination of the request for service from said one client terminal.* Nonetheless, these features are well known in the art and would have been an obvious modification to the system disclosed by Joffe, as evidenced by Jindal.

In an analogous art, Jindal discloses a system for load balancing among replicated services having server terminals divided into sever groups each having at least two of the server terminals (see Fig. 4, "400" and "410") and selecting based on the operating states one server terminal out of the server terminals in the group as a secondary destination of the request for service from said one client terminal (see column 2, lines 51-53; Note that the "selected policy" is the operating state of the server terminal.). Given this teaching by Jindal, a person having ordinary skill in the art would have readily recognized the advantages and desirability of modifying Joffe by incorporating these well known features for the reasons stated above with respect to claim 4.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,583,995 to Gardner et al.

U.S. Patent No. 5,799,002 to Krishnan

U.S. Patent No. 6,038,601 to Lambert et al.

U.S. Patent No. 6,330,602 to Law et al.

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13. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mareisha N. Winters whose telephone number is (703) 305-7838. The examiner can normally be reached on Monday-Friday, 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for official communications, (703) 746-7240 for non-official communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3900.

Mareisha N. Winters *mmw*  
Patent Examiner  
Art Unit 2153  
August 14, 2003

  
KRISNA LIM  
PRIMARY EXAMINER